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Notice of Allowability	Application No.	Applicant(s)	
	10/034,786	JOHN ET AL.	
	Examiner	Art Unit	
	Kim Nguyen	3713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1. ☒ This communication is responsive to amendment filed on April 20, 2004.
- 2. ☒ The allowed claim(s) is/are 2-11 and 13 Now renumbered as 1-11.
- 3. ☒ The drawings filed on 27 December 2001 are accepted by the Examiner.
- 4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 - 1. ☐ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

- 5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 - 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
- 7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Kim Nguyen
 Primary Examiner
 Art Unit: 3713

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

IN THE CLAIMS:

- a) In claim 2, line 2, delete "the" before --coarse and fine locations--
- b) In claim 2, line 1 of part (d), delete "the" before --phase difference--
- c) In claim 2, lines 1-2 of part (d), replace "the received signal" with --a received signal--
- d) In claim 2, line 3 of part (d), delete "the" before --directions--
- e) In claim 2, line 1 of part (e), delete "the" before --phase difference--
- f) In claim 2, line 1-2 of part (e), replace "the received signal" with --a received signal--
- g) In claim 4, line 3, delete "the" before --ball location--

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:

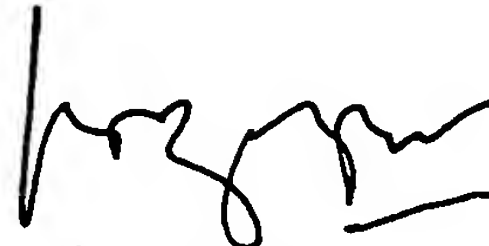
Prior arts of record do not disclose a system for determining coarse and fine locations of an object comprising four or more antennas, arranged in two or more closely spaced pairs dispersed in or around an area to be covered; downconvertors or receivers attached to each of the antennas with local oscillators of the downconvertors in all the receivers derived from a single reference; phase locked loops to stabilize and reject noise in the downconverted signals; phase detectors to determine phase difference between a received signal in each pair of antennas, providing coarse location through intersection of directions of arrival; phase detectors to determine phase difference between a received signal in antennas not in the same pair, providing a set of intersections of loci of constant phase difference; resolution of the fine location through selection among the intersections of loci of constant phase difference based on the obtained coarse location; and a transmitter in the object to be tracked.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Nguyen whose telephone number is (703) 308-7915. The examiner can normally be reached on Monday-Thursday from 8:30AM to 5:00PM ET. The central official fax number is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

A handwritten signature in black ink, appearing to read 'Kim Nguyen', with a stylized flourish at the end.

Kim Nguyen
Primary Examiner
Art Unit 3713

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Date: July 9, 2004